

**REMARKS:**

Reconsideration of the rejections is respectfully requested.

Applicant gratefully acknowledges the designation of claim 16 as containing allowable subject matter. However, as discussed below, Applicant respectfully submits that the rejection to the other claims should be withdrawn.

The status of the claims is as follows:

<b>Currently Amended</b>	12, 22
<b>Previously Cancelled:</b>	1-11
<b>Previously Presented:</b>	13-14, 16-21, 23-31
<b>Previously Amended</b>	15
<b>New</b>	32-33
<b>Pending:</b>	12-33

New claims 32 and 34 find support, for example, at 9:3-4. The comparative ink recited finds support at 9:7 through Table I on p. 10. No new matter is added.

**Claim Rejections - 35 U.S.C. §112, ¶2**

The Office Action asserts that "about" in the claims does not adequately appraise those of ordinary skill as to the scope of the claims. Applicant respectfully disagrees. The scope is to inks that flow well enough to perform substantially like the 30 poise example in Table I, and better than the Standard Ink of that Table. Accordingly, Applicant respectfully submits that the rejection is in error.

**Claim Rejections - 35 U.S.C. §103(a)**

**Rejection of Claims 12-15 Based on Matsushita Electric and Amendola**

Claims 12-15 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over Matsushita Electric, JP 8-264364 and Amendola, US 4,546,065. Applicant respectfully traverses.

Matsushita Electric teaches numerous methods of making inductors. Of the seven or more methods taught, one is a method involving molding channels. No technical detail of any substance is given for what appears to be one hypothetical method among many. What is clearly not taught is using a low viscosity ink. Moreover, screen printing is not taught. The fact that IBM Technical Disclosure Bulletin 16: 3561, April, 1974 ("TBD-2") uses an involved, different printing method is indicative that screen printing is not an obvious choice.

Amendola teaches a process that uses a glaze to photolithographic of conductor to channels. Amendola only fills the channels on top of a Multilayer ceramic after firing the stack. See 3: 24-30. The current claims call for densification after firing the channels. As noted in MPEP §2143.01, if a proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. Accordingly, Amendola cannot make obvious a process that does not densify prior to filling the channel.

Amendola's process, which is used to assure electrical connection between the upper leads and conductive vias, is not even about internal conductive channels. For these reasons, Applicant respectfully submits that the rejection should be withdrawn.

**Rejection of Claims 12 and 15 Based on TBD-2**

Claims 12 and 15 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2 and Schmeckenbecker, US 3,948,706. Applicant respectfully traverses.

TBD-2 Teaches as an essential feature of its process coating a ceramic sheet with the polymer PVA. The coated sheet is then impressed with a pattern. Metal powder paste is then squeegeed into the indentations. Applicant notes that the fourth paragraph of TBD-2 recites "filled by squeegeeing with a paste which contains metal powder... ***which does not attach [to] the PVA film on the ceramic sheet.*** Applicant respectfully submits that without the PVA, metal would stick to the ceramic sheet which is otherwise adsorbent and sticky. Accordingly, in the method taught in TBD-2, the PVA coating is essential. As noted in MPEP §2143.01, if a proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. Accordingly, TBD-2 cannot make obvious a process that does not use PVA or its like.

It should be noted that the current claims exclude the step of applying ink to a coating such as PVA. The channel is ***directly*** embossed on the surface of a green tape.

The Schmeckenbecker citation appears to be a formalization of the disclosure of TBD-2, discussed below. The Office states that it "would have been obvious to... have screen printed the paste directly into the green sheet ***using the PVA*** on the green sheet as a mask..." Applicant respectfully submits that, assuming the correctness of this statement for the sake of argument, it asserts only that a process that is expressly outside the current claims is obvious.

Accordingly, Applicant respectfully submits that the rejection should be withdrawn.

**Rejection of Claim 22 Based on TDB-2, Schmeckenbecher and Prabu**

Claim 22 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2, Schmeckenbecher and Prabu, US 5,277,724. Applicant respectfully traverses for the reasons outlined above.

**Rejection of Claims 13, 14, 23 and 24 Based on Prior Citations and Amendola**

Claim 22 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2, Schmeckenbecher, Prabu and Amendola. Applicant respectfully

submits that the very different process of Amendola, discussed above, suggests nothing about the details of process steps in the currently claimed process.

**Rejection of Claims 17, 18, 27 and 28 Based on Prior Citations and Vitriol**

Claims 17-18 and 27-28 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2, Schmeckenbecher, Prabu and Vitriol, US 5,028,473. Applicant respectfully traverses.

The Office Action indicates that Vitriol teaches making resisters and capacitors. Such resisters and capacitors are made without the aid of the channels used in the method now claimed. Applicant respectfully submits that Vitriol suggests nothing about what inks would be appropriate in the current method. Accordingly, Applicant respectfully submits that the rejection should be withdrawn.

**Rejection of Claims 19, 20, 29 and 30 Based on Prior Citations and Hernandez or Tormey**

Claims 19-20 and 29-30 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2, Schmeckenbecher, Prabu, Vitriol and Hernandez, US 5,272,590 or Tormey, US 5,953,203. Applicant respectfully submits that the very different inks and applications of Hernandez and Tormey suggest nothing about ink choices to be made in the claimed process.

**Rejections of Claims 21 and 31 Based on Prior Citations and Hayama**

Claims 21 and 31 stood rejected under 35 U.S.C. §103(a) based on an assertion of being unpatentable over TBD-2, Schmeckenbecher, Prabu and Hayama, US 5,609,704. Applicant respectfully traverses.

Hayama teaches a squeegeeing process such as that in the TBD-2, which uses a release layer 23 in place of PVA, and consequently does not address the shortcomings of TBD-2 as a

reference. Hayama is cited for teaching refilling a channel after firing. The refilling step of claims 21 and 31 is before firing, and not at all suggested by Hayama. Accordingly, Applicant respectfully submits that the rejections should be withdrawn.

**Conclusion**

In light of these amendments and remarks, it is respectfully submitted that the Amendment should be entered, the rejections should be withdrawn, and that the application is in condition for allowance.<sup>2</sup>

Respectfully submitted,



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<sup>2</sup> **FEE DEFICIENCY**

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